UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,543	02/27/2002	Rene Gallezot	FR920010006US1	7695

25299 7590 03/04/2005

IBM CORPORATION
PO BOX 12195
DEPT 9CCA, BLDG 002
RESEARCH TRIANGLE PARK, NC 27709

EXAMINER	
TORRES, JOSEPH D	

ART UNIT	PAPER NUMBER
2133	

DATE MAILED: 03/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/084,543	GALLEZOT ET AL.	
	Examiner	Art Unit	
	Joseph D. Torres	2133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9,12,13 and 15-20* is/are pending in the application.

4a) Of the above claim(s) *20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 5-9,12,13 and 15-20* is/are rejected.

7)☒ Claim(s) *4* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Newly submitted claim 20 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claim 20 is directed to a computational unit properly classified in 708/490.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 20 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Applicant's election with traverse of Group I, claims 1-9, 12, 13 and 15-18, in the reply filed on 02/14/2005 is acknowledged. The traversal is on the ground(s) that Groups II and III can be searched together. Since these groups are canceled, whether the two groups should be searched together or not is irrelevant to the current case since it appears that the Applicant agrees the Group I should be searched separately from Groups II and III.

Applicant's election without traverse of Group I, claims 1-9, 12, 13 and 15-1 in the reply filed on 02/14/2005 is acknowledged.

This application contains claim 20 drawn to a nonelected invention. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Drawings

2. The drawings were received on 02/27/2002. These drawings are accepted.

Specification

3. In view of the Amendment filed 02/14/2005, the Examiner withdraws the objection to the Abstract.

Claim Objections

4. The Applicant contends, "The reference numbers are enclosed in brackets which clearly shows that they are not part of the claim. Applicants have no knowledge of any rule or Patent Office custom that prohibits such usage in the claim. If the Examiner still persists that the reference number should be removed applicants, respectfully, request the Examiner to identify the authority or rule that makes such requirement mandatory". The Examiner asserts that the Applicant admits that "reference numbers" enclosed in brackets "are not part of the claim". The Applicant the asserts "the reference number makes it easier for the reader to associate the claim with both the drawing and the specification". First of all 37 CFR 1.75 states that the purpose of the claims is to point out and distinctly claim the subject matter which the applicant regards as his invention

or discovery. The claims are not written for the reader, but to point out and distinctly claim the subject matter which the applicant regards as his invention or discovery. In addition, the Examiner asserts that the reference numerals, if anything obstruct the Examiners ability to read and examine the claims and do not provide any make it easier for anyone especially the Examiner to understand what the Applicant regards as his invention or discovery. The Examine will not withdraw the objection to the claims until the reference numerals to the drawings are removed.

Claims 1-9, 12, 13 and 15-18 objected to because of the following informalities: they include reference numbers to the drawings that should be deleted. Appropriate correction is required.

The Applicant contends, "The Examiner states his objection to claim 17 as follows: "Claim 17 recites, 'in acts (d) being the calculated CRC' an act is not a calculated CRC." We believe the Examiner focus on only a portion of the claim gives rise to the misinterpretation that is applied. When the entire 17(g) is read it is believed that a reasonable Interpretation is that the result being the calculated CRC and not the acts as the Examiner seems to suggest. As a consequence, we believe the language of the claim is proper as is and see no reason to amend at this point".

The Examiner disagrees and asserts that act (d) does not produce a result nor does act (d) recite producing any result. The language at best is confusing and the Applicant's arguments to not fix the problems associated with the language. If the Applicant intended act (d) to produce a result, the applicant should recite such language.

Claim Rejections - 35 USC § 112

5. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitation "the N-bit chuck" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Response to Arguments

6. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3, 5-9, 12, 13 and 16-19 are rejected under 35 U.S.C. 102(b) as being anticiated by Freeman; Richard B. et al. (US 3678469 A, hereafter referred to as Freeman).

35 U.S.C. 102(b) rejection of claims 1 and 16-19.

Freeman teaches picking a new N-bit chunk of data bits from said binary string of data bits (New character unit 24 in Figure 1 of Freeman selects N-bits, N greater than 1, of data from a binary string of data bits); dividing modulo said generator polynomial G(x), said new N-bit chunk of data bits thus (Figure 2 in Freeman is a device for dividing modulo said generator polynomial G(x) 30 in Figure 2, said new N-bit chunk of data bits New Character 34); generating a value for FCS displaced within said cyclic group of d-bit wide binary vectors (Rectangular Array Calculator 20 in Figure 1 of Freeman displaces Old CRC to generate New CRC); adding modulo two, the N-bits and said value so generated (Old CRC 32 is added to New Character 34 in Figure 2 of Freeman; Note: Old CRC is displaced CRC since it is New CRC for a previous cycle); updating said d-bit wide FCS (New CRC is updated CRC in Figure 1 and 2 of Freeman); checking if more data bits of said binary string of data bits are left for calculation; if yes, resuming calculation loop at picking step; if not, exiting calculation loop; thereby, getting a final result of said CRC calculation in said d-bit wide FCS (The iterative encoding method of Figures 1 and 2 in Freeman continue until all New characters are used up).

35 U.S.C. 102(b) rejection of claim 2.

Freeman teaches a final result is provided to Memory 14 in Figure 1 of Cassiday.

35 U.S.C. 102(b) rejection of claim 3.

New CRC 30 in Freeman teaches said final result is a checking result of said binary string of data bits including said d-bit wide FCS.

35 U.S.C. 102(b) rejection of claim 5.

Freeman teaches padding (see New Character 34 in Figure 2a).

35 U.S.C. 102(b) rejection of claims 6 and 7.

Figure 6 on page 116 of Freeman teaches division for CRC corresponds to polynomial multiplication. Also see data arrangements in Figure 2 whereby calculations take place in parallel with data arranged in order of least to most significant bits and vice versa.

35 U.S.C. 102(b) rejection of claims 8 and 9.

Claims 8 and 9 recite intended use claims and the teaching in Freeman is inherently capable of being used in a networking environment or a computing system. In re Schreiber, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997)

35 U.S.C. 102(b) rejection of claim 12.

Figure 2 in Freeman is a processor executing instructions to calculate a CRC.

35 U.S.C. 102(b) rejection of claim 13.

CRC generation are modeled using state machines, i.e., LFSR circuits, hence a CRC calculation is a state machine operation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman; Richard B. et al. (US 3678469 A, hereafter referred to as Freeman).

35 U.S.C. 103(a) rejection of claim 15.

Freeman substantially teaches the claimed invention described in claim 1-2 (as rejected above).

However Freeman does not explicitly teach the specific use of computer software.

The Examiner asserts that one of ordinary skill in the art at the time the invention was made would have recognized that computer software offers a flexible scalable means for implementing an error correction algorithm.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Freeman by including use of computer software. This modification would have been obvious to one of ordinary skill in the art, at the time the invention was made, because one of ordinary skill in the art would have recognized that use of computer software would have provided a flexible scalable means for implementing an error correction algorithm.

Conclusion

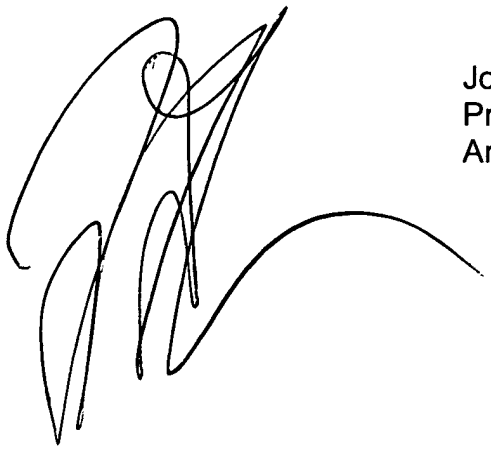
9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (571) 272-3829. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joseph D. Torres, PhD
Primary Examiner
Art Unit 2133